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EXAMINER	
SALTARELLI, DOMINIC D	
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2623	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/975,312	HENDRICKS ET AL.	
	Examiner	Art Unit	
	DOMINIC D. SALTARELLI	2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 March 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-64* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-64* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date. _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on February 1, 2008 has been entered.

Response to Arguments

2. Applicant's arguments with respect to claims 1-64 have been considered but are moot in view of the new grounds of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claim 1-13, 15-33, 43-50, 52-54, 56, 57, and 59-64 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rosser (6,446,261, of record) in view of Kitsukawa et al. (6,282,713, of record) [Kitsukawa], O'Toole, Jr. et al. (6,279,112, of record) [O'Toole], and Kurtzman, II et la. (6,144,944) [Kurtzman].

Regarding claim 1, Rosser discloses a method for targeting virtual advertisements comprising:

assigning insertion spots to a program (col. 6, lines 12-39);

assigning virtual objects to the virtual advertisement spot (advertisements and other insertion data are coordinated with images and scenes in view of a displayed video, col. 13, lines 13-48), wherein said virtual objects are dynamic (col. 7, lines 38-45);

generating a retrieval plan (the data necessary to enable a local terminal to select and seamlessly insert advertisement data, col. 6, lines 11-48 and col. 14, lines 26-47);

providing the retrieval plan to a terminal, wherein the retrieval plan instructs the terminals to select virtual objects (col. 6, line 49 - col. 7 line 45 and col. 14, lines 26-47);

allocating delivery bandwidth within an available amount of total bandwidth in a communication channel for the selected virtual objects via a resource management engine; and

delivering the selected virtual objects via said allocated delivery bandwidth (col. 6, lines 49-67).

Rosser fails to disclose the advertisements are interactive and selected from a ranked list of the interactive virtual objects, wherein said ranked list is determined at least by a measure of effectiveness for each one of said interactive virtual objects in a corresponding virtual object location, receiving a selection of

one of the interactive virtual objects, and logging the received selected of said interactive virtual objects and billing an advertiser of said selected interactive virtual objects in response to said logged selection.

In an analogous art, Kitsukawa discloses providing interactive advertisements to viewers by indicating with superimposed markings interactive regions on a screen by which users may request additional information or even order an advertised product by selecting the interactive object on screen (col. 2 line 18 – col. 3 line 19 and col. 6 line 40 – col. 7 line 40), providing the benefit of more engaging and effective advertising (col. 1 line 56 – col. 2 line 15).

It would have been obvious at the time to a person of ordinary skill in the art to modify the method disclosed by Rosser to include interactivity, as disclosed by Kitsukawa, for the benefit of providing more engaging and effective advertising that is of more use to both viewers and advertisers.

Rosser and Kitsukawa fail to disclose the advertisements are selected from a ranked list that is determined at least by a measure of effectiveness for each one of said interactive virtual objects in a corresponding virtual object location, logging the received selection of said interactive virtual objects, and billing an advertiser of said selected interactive virtual objects in response to said logged selection.

In an analogous art, O'Toole discloses a metering log which tracks the display of advertising content to users, wherein advertisers are billed according

to the metering information found in the log (col. 11, lines 1-8 and col. 12, lines 24-48), providing accurate billing information to advertisers.

Therefore, it would have been obvious at the time to a person of ordinary skill in the art to modify the method disclosed by Rosser and Kitsukawa to include logging the received selection of said interactive virtual objects and billing an advertiser of said selected interactive virtual objects in response to said logged selection, as taught by O'Toole, for the benefit of providing accurate billing information to advertisers, who are interested in paying only for the actual displaying of their advertisements.

Rosser, Kitsukawa, and O'Toole fail to disclose the advertisements are selected from a ranked list that is determined at least by a measure of effectiveness for each one of said interactive virtual objects in a corresponding virtual object location.

In an analogous art, Kurtzman discloses an advertisement selection engine that selects advertisements for display to clients by creating a ranked list determined by a measure of effectiveness for each advertisement relative to the content with which they will be displayed (each advertisement is associated with an affinity value which ranks the advertisement, col. 3 line 57 - col. 4 line 37, and col. 4 lines 50-63, which are then compiled into a list, col. 6, lines 59-67), providing the benefit of a more finely tuned selection process for finding the most effective advertisement to display to a client (selection process takes into

account the content being displayed, demographic information of the user, and also the profile and history of the user, col. 4, lines 32-63).

It would have been obvious at the time to a person of ordinary skill in the art to modify the method of Rosser, Kitsukawa, and O'Toole to include selecting the advertisements from a ranked list that is determined at least by a measure of effectiveness for each one of said interactive virtual objects in a corresponding virtual object location, as taught by Kurtzman, for the benefit of a more finely tuned selection process for finding the most effective advertisement to display to a client.

Regarding claim 2, Rosser, Kitsukawa, O'Toole, and Kurtzman disclose the method of claim 1, wherein generating the retrieval plan comprises assigning the terminal to one or more groups, designating a unique group mask for one or more of the groups, and assigning one or more of the groups to one of the interactive virtual objects, wherein the group mask indicates whether the terminal displays a particular interactive object (Rosser teaches advertisers direct advertisements to specific groups according to viewer usage profiles, col. 4, lines 15-41, where the 'group mask' is information provided which the local receiver uses to correlate received advertisement data with the local user profile to select advertisements for display, col. 7, lines 46-58 and col. 13 line 13 – col. 14 line 25).

Regarding claim 3, Rosser, Kitsukawa, O'Toole, and Kurtzman disclose the method of claim 2, wherein the step of assigning the terminal to one or more groups comprises generating group assignment rules (a step performed by the advertisers), delivering group assignment rules to the terminal (Rosser, col. 13, lines 34-37), storing the group assignment rules at the terminal (an inherent step required by the set top in order to process said rules for the subsequent determining step), and determining one or more group assignments based on the group assignment rules and data related to the terminal (Rosser, col. 13 line 49 – col. 14 line 25).

Regarding claim 4, Rosser, Kitsukawa, O'Toole, and Kurtzman disclose the method of claim 3, wherein the data related to the terminal includes programs watched data (Rosser, figs. 3 and 5, col. 7 line 59 – col. 8 line 19).

Regarding claim 5, Rosser, Kitsukawa, O'Toole, and Kurtzman disclose the method of claim 1, wherein the retrieval plan and group assignment rules are periodically sent to the terminal (Rosser teaches the data used by the terminal for selecting advertisements is sent over the VBI, col. 6, lines 49-67).

Regarding claim 6, Rosser discloses a method of targeting virtual objects comprising:

providing a program containing one or more virtual object locations (col. 6 line 12 – col. 7 line 45);

providing virtual objects for one or more of the virtual object locations (col. 7, lines 1-20), wherein said virtual objects are dynamic (col. 7, lines 38-45);

providing at least one alternative virtual object for at least one of the one or more virtual object locations (col. 7, lines 46-58, wherein the different insertions for different viewers may be for the same object location, col. 4, lines 31-41);

generating a retrieval plan at a user's terminal, wherein the retrieval plan designates which of the one or more object locations displays an alternate virtual object (col. 7, lines 46-58; col. 13, lines 13-48; and col. 14, lines 26-47);

allocating delivery bandwidth within an available amount of total bandwidth in a communication channel for the provided virtual objects and the alternate virtual object via a resource management engine; and

delivering the provided virtual objects via and the alternate virtual object via said allocated delivery bandwidth (col. 6, lines 49-67).

Rosser fails to disclose the objects are interactive, selected from a ranked list of the interactive virtual objects, wherein said ranked list is determined at least by a measure of effectiveness for each one of said interactive virtual objects in a corresponding virtual object location, receiving a selection of said interactive virtual objects, logging the received selection of said interactive virtual objects,

and billing an advertiser of said selected interactive virtual objects in response to said logged selection.

In an analogous art, Kitsukawa discloses providing interactive advertisements to viewers by indicating with superimposed markings interactive regions on a screen by which users may request additional information or even order an advertised product by selecting an interactive object on screen (col. 2 line 18 – col. 3 line 19 and col. 6 line 40 – col. 7 line 40), providing the benefit of more engaging and effective advertising (col. 1 line 56 – col. 2 line 15).

It would have been obvious at the time to a person of ordinary skill in the art to modify the method disclosed by Rosser to include interactivity, as disclosed by Kitsukawa, for the benefit of providing more engaging and effective advertising that is of more use to both viewers and advertisers.

Rosser and Kitsukawa fail to disclose the interactive virtual objects are selected from a ranked list of the interactive virtual objects, wherein said ranked list is determined at least by a measure of effectiveness for each one of said interactive virtual objects in a corresponding virtual object location, logging the received selection of said interactive virtual objects and billing an advertiser of said selected interactive virtual objects in response to said logged selection.

In an analogous art, O'Toole discloses a metering log which tracks the display of advertising content to users, wherein advertisers are billed according to the metering information found in the log (col. 11, lines 1-8 and col. 12, lines 24-48), providing accurate billing information to advertisers.

Therefore, it would have been obvious at the time to a person of ordinary skill in the art to modify the method disclosed by Rosser and Kitsukawa to include logging the received selection of said interactive virtual objects and billing an advertiser of said selected interactive virtual objects in response to said logged selection, as taught by O'Toole, for the benefit of providing accurate billing information to advertisers, who are interested in paying only for the actual displaying of their advertisements.

Rosser, Kitsukawa, and O'Toole fail to disclose the interactive virtual objects are selected from a ranked list that is determined at least by a measure of effectiveness for each one of said interactive virtual objects in a corresponding virtual object location.

In an analogous art, Kurtzman discloses an advertisement selection engine that selects advertisements for display to clients by creating a ranked list determined by a measure of effectiveness for each advertisement relative to the content with which they will be displayed (each advertisement is associated with an affinity value which ranks the advertisement, col. 3 line 57 - col. 4 line 37, and col. 4 lines 50-63, which are then compiled into a list, col. 6, lines 59-67), providing the benefit of a more finely tuned selection process for finding the most effective advertisement to display to a client (selection process takes into account the content being displayed, demographic information of the user, and also the profile and history of the user, col. 4, lines 32-63).

It would have been obvious at the time to a person of ordinary skill in the art to modify the method of Rosser, Kitsukawa, and O'Toole to include selecting the interactive virtual objects from a ranked list that is determined at least by a measure of effectiveness for each one of said interactive virtual objects in a corresponding virtual object location, as taught by Kurtzman, for the benefit of a more finely tuned selection process for finding the most effective advertisement to display to a client.

Regarding claims 7 and 8, Rosser, Kitsukawa, O'Toole, and Kurtzman disclose the method of claim 6, wherein the program is a television program or advertisement (Kitsukawa, col. 6, lines 40-48).

Regarding claim 9 and 10, Rosser, Kitsukawa, O'Toole, and Kurtzman disclose the method of claim 6, wherein at least one of the interactive virtual object locations is fixed in position across frames of the program or moves spatially in the program with time (Rosser, col. 7, lines 38-45 and col. 13, lines 25-32).

Regarding claim 11, Rosser, Kitsukawa, O'Toole, and Kurtzman disclose the method of claim 6, wherein at least one object is non-interactive (the objects disclosed by Rosser are ordinarily non-interactive).

Regarding claim 12, Rosser, Kitsukawa, O'Toole, and Kurtzman disclose the method of claim 6, wherein the program is broadcast to the terminal (Rosser, col. 7, lines 1-20), further comprising:

creating categories of interactive virtual objects and content (Rosser teaches categorizing content according to type, col. 8 line 56 – col. 9 line 30 and col. 11 line 62 – col. 12 line 34 and the virtual objects to be inserted into the content according to desired demographic, col. 13 line 49 – col. 14 line 25);

defining group categories (Rosser, fig. 5, "movies", "sit. com", "cartoons", etc…);

for one or more defined group categories, defining at least one group (Rosser teaches advertisers use the group categories of viewer profiles to define market segments, col. 12 line 55 – col. 13 line 12);

assigning a television terminals, for the one or more groups, to the at least one group (Rosser, col. 13, lines 49-63);

creating a group assignment matrix based on the categories of the interactive virtual objects, the group categories, and the group assignment (Rosser teaches demographic information, programming types, and viewing intensity of programming types are used to create a comprehensive viewer profiles, col. 9 line 49 – col. 10 line 5 and col. 12 line 55 – col. 13 line 12);

storing the group assignment matrix in the terminal (Rosser, fig. 1, viewer profile 50); and

comparing the retrieval plan to the group assignment matrix to determine interactive virtual objects to display in the one or more interactive virtual object locations (Rosser, col. 13, lines 13-48).

Regarding claim 13, Rosser, Kitsukawa, O'Toole, and Kurtzman disclose the method of claim 12, wherein generating the retrieval plan comprises:

assigning the interactive virtual objects to the interactive virtual object locations (Rosser teaches locating the regions into which advertising is to be inserted and associating plural advertisements with these locations, col. 6, lines 12-39 and col. 13, lines 13-48);

assigning the alternate interactive virtual objects to interactive virtual object locations (Rosser teaches locating the regions into which advertising is to be inserted and associating plural advertisements with these locations, col. 6, lines 12-39 and col. 13, lines 13-48);

assigning a group to the interactive virtual objects and the alternate interactive virtual objects (Rosser, col. 13, lines 34-48);

creating a group mask assignment, wherein the group mask assignment is used by the terminal to compare the retrieval plan to the group assignment matrix (Rosser, col. 13 line 49 – col. 14 line 25).

Regarding claim 15, Rosser, Kitsukawa, O'Toole, and Kurtzman disclose the method of claim 13, wherein groups are defined based on characteristics of users (Rosser, col. 13, lines 34-48).

Regarding claims 16-20, Rosser, Kitsukawa, O'Toole, and Kurtzman disclose the method of claim 15 wherein the characteristics include user demographic information (Rosser, col. 12 line 55 – col. 13 line 12), user entered information (Rosser, col. 4, lines 42-48 and col. 12 line 55 – col. 13 line 12, where user provided information used to interpret viewing intensities includes age, gender, income, etc…), programs watched data (Rosser, col. 8, lines 20-38), interactive virtual objects watched data (Rosser, col. 8, lines 20-38), and user activation of the interactive virtual objects (as user activation initiates the viewing a new material, Kitsukawa, col. 7, lines 21-40, where Rosser teaches tracking the viewing of all viewed material to track viewing intensity, col. 7 line 59 – col. 8 line 38).

Regarding claim 21, Rosser, Kitsukawa, O'Toole, and Kurtzman disclose the method of claim 12, wherein the terminal is a television set top terminal (Rosser, fig. 1, set top device 44).

Regarding claim 22, Rosser, Kitsukawa, O'Toole, and Kurtzman disclose the method of claim 12, wherein the terminal is incorporated into a personal computer (Rosser, col. 15, lines 10-28).

Regarding claim 23, Rosser, Kitsukawa, O'Toole, and Kurtzman disclose the method of claim 12, wherein the television terminal is coupled to a satellite television receiver (Rosser, fig. 4, satellite receiver 136).

Regarding claim 24, Rosser, Kitsukawa, O'Toole, and Kurtzman disclose the method of claim 12, and further disclose at the terminal, recording in a memory an identification of a virtual object displayed in a virtual object location and providing the identification to a remote site (Kitsukawa, col. 12, lines 1-20), and but fail to disclose deleting the identification from memory.

It is notoriously well known to delete objects from memory when they are no longer needed, as this frees up said memory for storage of new objects in the future.

It would have been obvious at the time to a person of ordinary skill in the art to modify the method disclosed by Rosser, Kitsukawa, O'Toole, and Kurtzman to include deleting identifications from memory, for the benefit of freeing memory for the storage of new identifications in the future.

Regarding claim 25, Rosser, Kitsukawa, O'Toole, and Kurtzman disclose the method of claim 12, wherein the retrieval plan is provided with the transmission of the program and periodically to the terminal, the terminal storing the retrieval plan in memory (Rosser teaches the 'extra data' is sent in the vertical blanking interval, col. 6, lines 49-67).

Regarding claim 26, Rosser discloses a method of targeting virtual objects to terminals, comprising:

creating a package of targeted virtual objects (col. 6, lines 8-48), wherein said virtual objects are dynamic (col. 7, lines 38-45);

providing the package to the terminals (col. 6, lines 49-67);

generating a group assignment matrix, wherein the group assignment matrix assigns terminals to groups (col. 13 line 49 – col. 14 line 25);

generating a retrieval plan (col. 6, lines 12-39 and col. 14, lines 26-47);

storing the retrieval plan at the terminals (col. 14, lines 26-47);

providing a program to the terminals, the program including virtual object locations, therein the retrieval plan designates virtual objects to the displayed during a display of the program (col. 13, lines 13-48);

allocating delivery bandwidth within an available amount of total bandwidth in a communication channel for the designated virtual objects via a resource management engine; and

delivering the designated virtual objects via said allocated delivery bandwidth (col. 6, lines 49-67).

Rosser fails to disclose the objects are interactive, the interactive virtual objects are selected from a ranked list that is determined at least by a measure of effectiveness for each one of said interactive virtual objects in a corresponding virtual object location, receiving a selection of one of the designated interactive virtual objects, logging the received selection of said interactive virtual objects, and billing an advertiser of said selected interactive virtual objects in response to said logged selection.

In an analogous art, Kitsukawa discloses providing interactive advertisements to viewers by indicating with superimposed markings interactive regions on a screen by which users may request additional information or even order an advertised product by selecting on the of the interactive objects on the screen (col. 2 line 18 – col. 3 line 19 and col. 6 line 40 – col. 7 line 40), providing the benefit of more engaging and effective advertising (col. 1 line 56 – col. 2 line 15).

It would have been obvious at the time to a person of ordinary skill in the art to modify the method disclosed by Rosser to include interactivity, as disclosed by Kitsukawa, for the benefit of providing more engaging and effective advertising that is of more use to both viewers and advertisers.

Rosser and Kitsukawa fail to disclose the interactive virtual objects are selected from a ranked list that is determined at least by a measure of

effectiveness for each one of said interactive virtual objects in a corresponding virtual object location, logging the received selection of said interactive virtual objects, and billing an advertiser of said selected interactive virtual objects in response to said logged selection.

In an analogous art, O'Toole discloses a metering log which tracks the display of advertising content to users, wherein advertisers are billed according to the metering information found in the log (col. 11, lines 1-8 and col. 12, lines 24-48), providing accurate billing information to advertisers.

Therefore, it would have been obvious at the time to a person of ordinary skill in the art to modify the method disclosed by Rosser and Kitsukawa to include logging the received selection of said interactive virtual objects and billing an advertiser of said selected interactive virtual objects in response to said logged selection, as taught by O'Toole, for the benefit of providing accurate billing information to advertisers, who are interested in paying only for the actual displaying of their advertisements.

Rosser, Kitsukawa, and O'Toole fail to disclose the interactive virtual objects are selected from a ranked list that is determined at least by a measure of effectiveness for each one of said interactive virtual objects in a corresponding virtual object location.

In an analogous art, Kurtzman discloses an advertisement selection engine that selects advertisements for display to clients by creating a ranked list determined by a measure of effectiveness for each advertisement relative to the

content with which they will be displayed (each advertisement is associated with an affinity value which ranks the advertisement, col. 3 line 57 - col. 4 line 37, and col. 4 lines 50-63, which are then compiled into a list, col. 6, lines 59-67), providing the benefit of a more finely tuned selection process for finding the most effective advertisement to display to a client (selection process takes into account the content being displayed, demographic information of the user, and also the profile and history of the user, col. 4, lines 32-63).

It would have been obvious at the time to a person of ordinary skill in the art to modify the method of Rosser, Kitsukawa, and O'Toole to include selecting the interactive virtual objects from a ranked list that is determined at least by a measure of effectiveness for each one of said interactive virtual objects in a corresponding virtual object location, as taught by Kurtzman, for the benefit of a more finely tuned selection process for finding the most effective advertisement to display to a client.

Regarding claim 27, Rosser, Kitsukawa, O'Toole, and Kurtzman disclose the method of claim 26, and further disclose at a terminal, receiving the program and retrieving one of the targeted virtual object for display in a virtual object location (Rosser, col. 13, lines 13-48).

Regarding claim 28, Rosser, Kitsukawa, O'Toole, and Kurtzman disclose the method of claim 27, and further disclose the retrieval step comprises

comparing the group assignment matrix to the retrieval plan and selecting an interactive virtual object for display based on the comparison (Rosser, col. 13, lines 13-48, as selection of an advertisement requires comparison of the advertisement's targeted audience data with the locally stored profile and the information which designates how and where to insert each advertisement in order to finally determine which advertisement is to be selected when the opportunity to insert that advertisement arises, col. 13 line 28 "…when a particular image or scene is in view", therefore if the group assignment matrix designates that particular ad should be shown to a particular viewer, the system still must perform a determination to see if the advertisement can be inserted).

Regarding claim 29, Rosser, Kitsukawa, O'Toole, and Kurtzman disclose the method of claim 26, wherein the virtual object locations contain interactive virtual objects (Rosser, col. 10, lines 21-35 and Kitsukawa, fig. 5), and further comprising linking a terminal selecting the designated interactive virtual object to an alternate program (Kitsukawa, col. 7, lines 21-40).

Regarding claim 30, Rosser, Kitsukawa, O'Toole, and Kurtzman disclose the method of claim 29, wherein the alternative program comprises an Internet web site (Kitsukawa, col. 8, lines 37-57).

Regarding claim 31, Rosser, Kitsukawa, O'Toole, and Kurtzman disclose the method of claim 26, wherein the step of generating the group assignment matrix comprises generating group assignment rules, delivering group assignment rules to the terminals, and determine one or more group assignments at the terminals based on the group assignment rules and individual terminal data and terminal group data (Rosser, col. 13 line 13 – col. 14 line 25).

Regarding claim 32, Rosser, Kitsukawa, O'Toole, and Kurtzman disclose the method of claim 31, wherein the individual terminal data comprises programs watched data (Rosser, col. 7 line 59 – col. 8 line 19).

Regarding claim 33, Rosser, Kitsukawa, O'Toole, and Kurtzman disclose the method of claim 31, wherein the group assignment rules are stored in the terminals (Rosser, col. 13, lines 19-25).

Regarding claim 43, Rosser discloses a system for targeting virtual objects, comprising:

a virtual object operations center that includes a resource management engine for allocating delivery bandwidth within an available amount of total bandwidth in a communication channel for selected virtual objects and delivering the selected virtual objects via said allocated delivery bandwidth (col. 6, lines 49-67);

a virtual object insertion center coupled to said virtual object operations center (fig. 1, LVIS 16) that defines virtual object locations in program content for insertion of virtual objects, the insertion center comprising a virtual object location definer, a virtual object selector coupled to the definer, and a virtual object manager coupled to the definer and the selector (col. 6, lines 12-48), and

a terminal, coupled to the insertion center, the receives virtual objects, wherein said virtual objects are dynamic (col. 7, lines 38-45), and the program content having virtual object locations (fig. 1, set top device 44), wherein the terminal comprises a location processor that detects virtual object locations in the program content and a selector processor that determines which of the received virtual objects are to be placed in allowable content locations for the virtual objects (col. 7, lines 21-45 and col. 13, lines 13-48).

Rosser fails to disclose the objects are interactive, the interactive virtual objects are selected from a ranked list that is determined at least by a measure of effectiveness for each one of said interactive virtual objects in a corresponding virtual object location, and an interactive virtual object trigger processor that receives and processes an interactive selection, and a computer readable memory for logging a received selection of one of the interactive vitual objects, wherein said logged selection is used for billing an advertiser of said selected interactive virtual objects.

In an analogous art, Kitsukawa discloses providing interactive advertisements to viewers by indicating with superimposed markings interactive

regions on a screen by which users may request additional information or even order an advertised product (col. 2 line 18 – col. 3 line 19 and col. 6 line 40 – col. 7 line 40), providing the benefit of more engaging and effective advertising (col. 1 line 56 – col. 2 line 15).

It would have been obvious at the time to a person of ordinary skill in the art to modify the method disclosed by Rosser to include interactivity, as disclosed by Kitsukawa, for the benefit of providing more engaging and effective advertising that is of more use to both viewers and advertisers.

Rosser and Kitsukawa fail to disclose the interactive virtual objects are selected from a ranked list that is determined at least by a measure of effectiveness for each one of said interactive virtual objects in a corresponding virtual object location and a computer readable memory for logging the received selection of said interactive virtual objects and billing an advertiser of said selected interactive virtual objects in response to said logged selection.

In an analogous art, O'Toole discloses a metering log which tracks the display of advertising content to users, wherein advertisers are billed according to the metering information found in the log (col. 11, lines 1-8 and col. 12, lines 24-48), providing accurate billing information to advertisers.

Therefore, it would have been obvious at the time to a person of ordinary skill in the art to modify the system disclosed by Rosser and Kitsukawa to include a computer readable memory for logging the received selection of said interactive virtual objects and billing an advertiser of said selected interactive

virtual objects in response to said logged selection, as taught by O'Toole, for the benefit of providing accurate billing information to advertisers, who are interested in paying only for the actual displaying of their advertisements.

Rosser, Kitsukawa, and O'Toole fail to disclose the interactive virtual objects are selected from a ranked list that is determined at least by a measure of effectiveness for each one of said interactive virtual objects in a corresponding virtual object location.

In an analogous art, Kurtzman discloses an advertisement selection engine that selects advertisements for display to clients by creating a ranked list determined by a measure of effectiveness for each advertisement relative to the content with which they will be displayed (each advertisement is associated with an affinity value which ranks the advertisement, col. 3 line 57 - col. 4 line 37, and col. 4 lines 50-63, which are then compiled into a list, col. 6, lines 59-67), providing the benefit of a more finely tuned selection process for finding the most effective advertisement to display to a client (selection process takes into account the content being displayed, demographic information of the user, and also the profile and history of the user, col. 4, lines 32-63).

It would have been obvious at the time to a person of ordinary skill in the art to modify the system of Rosser, Kitsukawa, and O'Toole to include selecting the advertisements from a ranked list that is determined at least by a measure of effectiveness for each one of said interactive virtual objects in a corresponding virtual object location, as taught by Kurtzman, for the benefit of a more finely

tuned selection process for finding the most effective advertisement to display to a client.

Regarding claim 44, Rosser, Kitsukawa, O'Toole, and Kurtzman disclose the system of claim 43, but fail to disclose the processed interactive selection is received at the insertion center, and wherein the received selection triggers a response that is sent to the terminal.

It is notoriously well known to download additional data for interactive applications on request from a broadcast center or head end, conserving both transmission bandwidth, as the data is only sent when requested by a viewer, and local storage, as the user's terminal does not have to store what could potentially be an overwhelming amount of additional content that the user would likely only access a fraction of.

It would have been obvious at the time to a person of ordinary skill in the art to modify the system disclosed by Rosser, Kitsukawa, O'Toole, and Kurtzman to include the processed interactive selection is received at the insertion center, and wherein the received selection triggers a response that is sent to the terminal, for the benefit of conserving both transmission bandwidth and local storage.

Regarding claim 45, Rosser, Kitsukawa, O'Toole, and Kurtzman disclose the system of claim 43, wherein the processed interactive selections are retained

at the terminal, wherein the received selection triggers a response that is generated at the terminal (Kitsukawa, col. 7, lines 21-40).

Regarding claim 46, Rosser, Kitsukawa, O'Toole, and Kurtzman disclose the system of claim 43, wherein the interactive virtual objects are delivered to the terminal by a cable television system, wireless broadcast system, a satellite broadcasts system, a wired data network, or a terrestrial television broadcast network (Rosser, col. 7, lines 1-20).

Regarding claims 47 and 48, Rosser, Kitsukawa, O'Toole, and Kurtzman disclose the system of claim 43, and further disclose an interactive virtual object retrieval plan, wherein the interactive virtual objects and the retrieval plan are delivered from an interactive virtual object delivery system [the insertion center] (Rosser, col. 6, lines 12-67).

Regarding claim 49, Rosser, Kitsukawa, O'Toole, and Kurtzman disclose the system of claim 48, and further disclose replacement virtual objects and a replacement retrieval plan are delivered from the local insertion center (Rosser, col. 4, lines 31-41 and col. 10, lines 21-51).

Regarding claim 50, Rosser, Kitsukawa, O'Toole, and Kurtzman disclose the system of claim 43, wherein an interactive virtual object comprises:

an interactive virtual object identifier (an inherent feature, as the digital objects are individually selectable and distinct, Rosser, col. 13, lines 13-48);

interactive virtual object placement rules, wherein the rules provide guidance to the terminal in managing insertion of interactive virtual objects into the program content (col. 14 line 48 – col. 15 line 5);

an interactive virtual object digital module, wherein the module comprises a digital file of the interactive virtual object (the graphics or videos for insertion, Rosser, col. 7, lines 1-20); and

an interactive virtual object trigger action that defines an action to be taken upon triggering of the virtual object at the terminal (Kitsukawa, col. 7, lines 21-40).

Regarding claim 52, Rosser, Kitsukawa, O'Toole, and Kurtzman disclose the system of claim 50, wherein the interactive virtual object trigger action initiates an interactive request to a location external to the terminal (Kitsukawa, col. 8, lines 37-57).

Regarding claim 53, Rosser, Kitsukawa, O'Toole, and Kurtzman disclose the system of claim 52, wherein the location external to the system further comprises an interactive virtual object management center and an interactive virtual object servicing center coupled to the interactive virtual object management center, wherein the management center provides interactive virtual

object response management guidelines to the servicing center, and wherein the guidelines determine an appropriate response based on receipt of an interactive request from the terminal (Kitsukawa, col. 11 line 62 – col. 12 line 20, wherein redeeming a coupon via an electronic link is to sends and 'interactive request' to a remote computer which has been programmed or instructed by a merchandise dealer or retailer with instructions for coupon redemption).

Regarding claim 54, Rosser, Kitsukawa, O'Toole, and Kurtzman disclose the system of claim 43, wherein the terminal comprises:

an interactive virtual object extractor that extracts interactive virtual objects from data received at the terminal (Rosser, col. 7, lines 46-58);

an interactive virtual object location detector processor, coupled to the extractor, that determines the allowable content locations for the interactive virtual objects (Rosser, col. 7, lines 21-45 and col. 10, lines 21-51);

an interactive virtual object insertion processor, coupled to the selector processor, that inserts the selected interactive virtual objects into the allowable content locations (Rosser, col. 7, lines 21-45 and col. 10, lines 21-51).

Regarding claims 56 and 57, Rosser, Kitsukawa, O'Toole, and Kurtzman disclose the system of claim 43, wherein the interactive virtual objects are selectable by a user at the terminal and wherein the interactive selection is processed automatically by the terminal (Kitsukawa, col. 7, lines 21-40).

Regarding claim 59, Rosser discloses a method of targeting virtual objects to terminals comprising:

creating a package of targeted virtual objects (col. 6, lines 8-48), wherein said virtual objects are dynamic (col. 7, lines 38-45);

providing the package to terminals (col. 6, lines 49-67);

generating a group assignment matrix, wherein the group assignment matrix assigns terminals to groups (col. 13 line 49 – col. 14 line 25);

generating a retrieval plan (col. 6, lines 12-39 and col. 14, lines 26-47);

providing a program to the terminals, the program including virtual object locations, wherein the retrieval plan designates virtual objects to the displayed during a display of the program (col. 13, lines 13-48);

allocating delivery bandwidth within an available amount of total bandwidth in a communication channel for the designated virtual objects via a resource management engine; and

delivering the designated virtual objects via said allocated delivery bandwidth (col. 6, lines 49-67).

Rosser fails to disclose the objects are interactive, the interactive virtual objects are selected from a ranked list that is determined at least by a measure of effectiveness for each one of said interactive virtual objects in a corresponding virtual object location, receiving a selection of one of the designated interactive virtual objects, and logging the received selection of said interactive virtual

objects, and billing an advertiser of said selected interactive virtual objects in response to said logged selection.

In an analogous art, Kitsukawa discloses providing interactive advertisements to viewers by indicating with superimposed markings interactive regions on a screen by which users may request additional information or even order an advertised product by selecting an interactive object on the screen (col. 2 line 18 – col. 3 line 19 and col. 6 line 40 – col. 7 line 40), providing the benefit of more engaging and effective advertising (col. 1 line 56 – col. 2 line 15).

It would have been obvious at the time to a person of ordinary skill in the art to modify the method disclosed by Rosser to include interactivity, as disclosed by Kitsukawa, for the benefit of providing more engaging and effective advertising that is of more use to both viewers and advertisers.

Rosser and Kitsukawa fail to disclose the interactive virtual objects are selected from a ranked list that is determined at least by a measure of effectiveness for each one of said interactive virtual objects in a corresponding virtual object location, logging the received selection of said interactive virtual objects, and billing an advertiser of said selected interactive virtual objects in response to said logged selection.

In an analogous art, O'Toole discloses a metering log which tracks the display of advertising content to users, wherein advertisers are billed according to the metering information found in the log (col. 11, lines 1-8 and col. 12, lines 24-48), providing accurate billing information to advertisers.

Therefore, it would have been obvious at the time to a person of ordinary skill in the art to modify the method disclosed by Rosser and Kitsukawa to include logging the received selection of said interactive virtual objects and billing an advertiser of said selected interactive virtual objects in response to said logged selection, as taught by O'Toole, for the benefit of providing accurate billing information to advertisers, who are interested in paying only for the actual displaying of their advertisements.

Rosser, Kitsukawa, and O'Toole fail to disclose the interactive virtual objects are selected from a ranked list that is determined at least by a measure of effectiveness for each one of said interactive virtual objects in a corresponding virtual object location.

In an analogous art, Kurtzman discloses an advertisement selection engine that selects advertisements for display to clients by creating a ranked list determined by a measure of effectiveness for each advertisement relative to the content with which they will be displayed (each advertisement is associated with an affinity value which ranks the advertisement, col. 3 line 57 - col. 4 line 37, and col. 4 lines 50-63, which are then compiled into a list, col. 6, lines 59-67), providing the benefit of a more finely tuned selection process for finding the most effective advertisement to display to a client (selection process takes into account the content being displayed, demographic information of the user, and also the profile and history of the user, col. 4, lines 32-63).

It would have been obvious at the time to a person of ordinary skill in the art to modify the method of Rosser, Kitsukawa, and O'Toole to include selecting the interactive virtual objects from a ranked list that is determined at least by a measure of effectiveness for each one of said interactive virtual objects in a corresponding virtual object location, as taught by Kurtzman, for the benefit of a more finely tuned selection process for finding the most effective advertisement to display to a client.

Regarding claim 60, Rosser, Kitsukawa, O'Toole, and Kurtzman disclose the method of claim 59, wherein one or more virtual objects include triggers that initiate a signal from the terminal (Kitsukawa, col. 7, lines 21-40), the method further comprising receiving a trigger, retrieving an interactive virtual object trigger action in response to receipt of the trigger and determining if the interactive virtual object trigger action requires initiation of an interactive request (Kitsukawa, col. 7, lines 21-40 and col. 8, lines 37-58).

Regarding claim 61, Rosser, Kitsukawa, O'Toole, and Kurtzman disclose the method of claim 60, wherein the interactive virtual object trigger action requires initiation of the interactive request (user actuation, such as 'clicking' on a portion of the screen), the method further comprising sending the interactive request, awaiting an interactive response, and initiating an interactive action

based on the interactive response (Kitsukawa, col. 7, lines 21-40 and col. 8, lines 37-58).

Regarding claim 62, Rosser, Kitsukawa, O'Toole, and Kurtzman disclose the method of claim 60, but fail to disclose the interactive virtual object trigger action does not require initiation of the interactive request, the method further comprising initiating processing required by the interactive virtual object trigger action.

It is notoriously well known in the art to send interactive triggers which automatically initiate an interactive feature in program broadcasts, a tool used by broadcasters to create media enhanced programming according to a predetermined schedule, such as the use of ATVEF triggers.

It would have been obvious at the time to a person of ordinary skill in the art to modify the method disclosed by Rosser, Kitsukawa, O'Toole, and Kurtzman to include the interactive virtual object trigger action does not require initiation of the interactive request, the method further comprising initiating processing required by the interactive virtual object trigger action, for the benefit of allowing broadcasters to present interactive content in accordance with a predetermined schedule.

Regarding claim 63, Rosser, Kitsukawa, O'Toole, and Kurtzman disclose the method of claim 59, wherein the virtual object locations contain interactive

virtual objects (Rosser, col. 10, lines 21-35 and Kitsukawa, fig. 5), and linking a terminal selecting the designated interactive virtual object to an alternate program (Kitsukawa, col. 7, lines 21-40).

Regarding claim 64, Rosser, Kitsukawa, O'Toole, and Kurtzman disclose the method of claim 63, wherein the alternative program comprises an Internet web site (Kitsukawa, col. 8, lines 37-57).

5. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rosser, Kitsukawa, O'Toole, and Kurtzman as applied to claim 13 above, and further in view of Hendricks et al. (5,600,364, of record) [Hendricks] and Del Sesto et al. (6,530,082, of record) [Del Sesto]

Regarding claim 14, Rosser, Kitsukawa, O'Toole, and Kurtzman disclose the method of claim 13, but fail to disclose wherein assigning the group to each of the default interactive virtual objects and the alternate interactive virtual objects comprises ranking programs based on categories of targeted interactive virtual objects and a percentage of total viewers who view one or more of the programs, ranking of targeted interactive virtual objects based on a second percentage of total viewers, determining, for the one or more ranked programs and the targeting categories, targeted interactive virtual objects with overall highest rankings, based on the first and the second percentages, assigning targeted interactive virtual objects with the overall highest ranking to be displayed

as the interactive virtual objects, and assigning targeted virtual objects with lower overall ranking to be displayed as the alternate interactive virtual objects.

In an analogous art, Hendricks teaches an advertisement selection routine which selects advertisements for transmission to viewers that comprises ranking programs based on categories of targeted advertisements (col. 38, lines 54-61), ranking of targeted advertisements (col. 39, lines 7-39), determining, for the one or more ranked programs and the targeting categories, targeted advertisements with overall highest rankings, assigning targeted advertisements with the overall highest ranking to be displayed as the advertisements, and assigning targeted advertisements with lower overall ranking to be displayed as the alternate advertisements (col. 39, lines 40-53), for the benefit of performing a correlation between advertisements and viewed programming which associates advertisements with programming that improves the targeting process, which benefits the advertisement providers.

It would have been obvious at the time to a person of ordinary skill in the art to modify the method of Rosser, Kitsukawa, O'Toole, and Kurtzman to include ranking programs based on categories of targeted advertisements, ranking of targeted advertisements, determining, for the one or more ranked programs and the targeting categories, targeted advertisements with overall highest rankings, assigning targeted advertisements with the overall highest ranking to be displayed as the advertisements, and assigning targeted advertisements with lower overall ranking to be displayed as the alternate advertisements, for the

benefit of performing a correlation between advertisements and viewed programming which associates advertisements with programming that improves the targeting process, which benefits the advertisement providers, as Rosser leaves it entirely up to advertisers to select on their own which viewers they want to target their ads to based only upon a statistical sample (Rosser, col. 12 line 55 – col. 13 line 12).

Rosser, Kitsukawa, O'Toole, Kurtzman, and Hendricks fail to disclose tracking the percentages of total viewers for the programs and virtual objects.

In an analogous art, Del Sesto discloses tracking the percentages of viewership of both broadcast programs and commercials (col. 15 line 55 – col. 16 line 29 and col. 16, lines 47-67) providing more detailed reports of viewership data to broadcasters and advertisers (col. 2 line 43 – col. 3 line 7).

It would have been obvious at the time to a person of ordinary skill in the art to modify the method of Rosser, Kitsukawa, O'Toole, Kurtzman, and Hendricks to include tracking the percentages of total viewers for the programs and virtual objects, as taught by Del Sesto, for the benefit of providing more detailed reports of viewership data to broadcasters and advertisers. The ranking step would then be based on these percentages because Rosser teaches it is desirable to sell segments of an audience to different advertisers based on profile factors (Rosser, col. 13, lines 4-12 and lines 57-63), and Del Sesto teaches determining these segments according to total viewer percentages (Del Sesto, col. 2 line 53 – col. 3 line 7).

6. Claims 34-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rosser in view of Kitsukawa, Zigmond et al. (6,698,020, of record) [Zigmond], O'Toole, and Kurtzman.

Regarding claim 34, Rosser discloses a terminal for targeting virtual objects comprising:

a connector that receives the virtual objects and virtual object locations and metadata (col. 7, lines 21-45) via delivery bandwidth allocated within an available amount of total bandwidth in a communication channel by a resource management engine (col. 6, lines 49-67), wherein said virtual objects are dynamic (col. 7, lines 38-45);

a virtual objects extractor coupled to the connector that extracts the virtual objects, the locations, and the metadata (col. 7, lines 46-58); and

a virtual object selector processor that determines an virtual object placement for stored virtual objects (col. 13, lines 13-48).

Rosser fails to disclose the objects are interactive and a storage processor coupled to the extractor that determines which of the extracted virtual objects are targeted to the terminal and saves the targeted virtual objects in a memory, the interactive virtual objects are selected from a ranked list is determined at least by a measure of effectiveness for each one of said interactive virtual objects in a corresponding virtual object location, and a computer readable memory for logging a received selection of one of the interactive virtual objects, where said

logged selection is used for billing an advertiser of said selected interactive virtual objects.

In an analogous art, Kitsukawa discloses providing interactive advertisements to viewers by indicating with superimposed markings interactive regions on a screen by which users may request additional information or even order an advertised product (col. 2 line 18 – col. 3 line 19 and col. 6 line 40 – col. 7 line 40), providing the benefit of more engaging and effective advertising (col. 1 line 56 – col. 2 line 15).

It would have been obvious at the time to a person of ordinary skill in the art to modify the terminal disclosed by Rosser to include interactivity, as disclosed by Kitsukawa, for the benefit of providing more engaging and effective advertising that is of more use to both viewers and advertisers.

Rosser and Kitsukawa fail to disclose a storage processor coupled to the extractor that determines which of the extracted virtual objects are targeted to the terminal and saves the targeted virtual objects in a memory, the interactive virtual objects are selected from a ranked list is determined at least by a measure of effectiveness for each one of said interactive virtual objects in a corresponding virtual object location, and a computer readable memory for logging a received selection of one of the interactive virtual objects, where said logged selection is used for billing an advertiser of said selected interactive virtual objects.

In an analogous art, Zigmond discloses and advertisement insertion system wherein advertisements are pre-screened and only those advertisements

which are targeted to the terminal are stored, more efficiently utilizing the limited amount of storage space available in the terminal (col. 15, lines 17-34).

It would have been obvious at the time to a person of ordinary skill in the art to modify the terminal disclosed by Rosser and Kitsukawa to include a storage processor that determines which of the extracted virtual objects are targeted to the terminal and saves the targeted virtual objects in a memory, as taught by Zigmond, for the benefit of more efficiently utilizing the limited amount of storage available in the terminal.

Rosser, Kitsukawa, and Zigmond fail to disclose the interactive virtual objects are selected from a ranked list is determined at least by a measure of effectiveness for each one of said interactive virtual objects in a corresponding virtual object location, a computer readable memory for logging the received selection of said interactive virtual objects and billing an advertiser of said selected interactive virtual objects in response to said logged selection.

In an analogous art, O'Toole discloses a metering log which tracks the display of advertising content to users, wherein advertisers are billed according to the metering information found in the log (col. 11, lines 1-8 and col. 12, lines 24-48), providing accurate billing information to advertisers.

Therefore, it would have been obvious at the time to a person of ordinary skill in the art to modify the terminal disclosed by Rosser, Kitsukawa, and Zigmond to include a computer readable memory for logging the received selection of said interactive virtual objects and billing an advertiser of said

selected interactive virtual objects in response to said logged selection, as taught by O'Toole, for the benefit of providing accurate billing information to advertisers, who are interested in paying only for the actual displaying of their advertisements.

Rosser, Kitsukawa, Zigmond, and O'Toole fail to disclose the interactive virtual objects are selected from a ranked list is determined at least by a measure of effectiveness for each one of said interactive virtual objects in a corresponding virtual object location.

In an analogous art, Kurtzman discloses an advertisement selection engine that selects advertisements for display to clients by creating a ranked list determined by a measure of effectiveness for each advertisement relative to the content with which they will be displayed (each advertisement is associated with an affinity value which ranks the advertisement, col. 3 line 57 - col. 4 line 37, and col. 4 lines 50-63, which are then compiled into a list, col. 6, lines 59-67), providing the benefit of a more finely tuned selection process for finding the most effective advertisement to display to a client (selection process takes into account the content being displayed, demographic information of the user, and also the profile and history of the user, col. 4, lines 32-63).

It would have been obvious at the time to a person of ordinary skill in the art to modify the terminal of Rosser, Kitsukawa, Zigmond, and O'Toole to include selecting the advertisements from a ranked list that is determined at least by a measure of effectiveness for each one of said interactive virtual objects in a

corresponding virtual object location, as taught by Kurtzman, for the benefit of a more finely tuned selection process for finding the most effective advertisement to display to a client.

Regarding claim 35, Rosser, Kitsukawa, Zigmond, O'Toole, and Kurtzman disclose the terminal of claim 34, wherein the interactive virtual objects are received with programming content and wherein the extractor extracts the interactive virtual objects from the programming content (Rosser, col. 7, lines 46-57).

Regarding claims 36 and 37, Rosser, Kitsukawa, Zigmond, O'Toole, and Kurtzman disclose the terminal of claim 34, wherein the interactive virtual objects are received over the Internet (Zigmond, col. 14 line 66 – col. 15 line 16).

Regarding claims 38-41, Rosser, Kitsukawa, Zigmond, O'Toole, and Kurtzman disclose the terminal of claims 34 and 38, wherein the terminal is a set top terminal (Rosser, fig. 1, set top device 44), a television (Zigmond, col. 7, lines 50-67), or a personal computer (Rosser, col. 15, lines 10-28).

Regarding claim 42, Rosser, Kitsukawa, Zigmond, O'Toole, and Kurtzman disclose the terminal of claim 34, and further disclose a placement log coupled to the selector processor that logs the placement of an interactive virtual object and

further logs and interactive response to the interactive virtual object, wherein the placement and the response are stored in the memory, and wherein the selector processor uses the placement and the response in determining further interactive virtual objects (Zigmond, col. 9, lines 39-55).

7. Claim 51 rejected under 35 U.S.C. 103(a) as being unpatentable over Rosser, Kitsukawa, O'Toole, and Kurtzman as applied to claim 50 above, and further in view of Del Sesto.

Regarding claim 51, Rosser, Kitsukawa, O'Toole, and Kurtzman disclose the system of claim 50, but fail to disclose the interactive virtual object further comprises a virtual object applet that provides software capable of initiation by a source external to the terminal.

In an analogous art, Del Sesto teaches a viewership monitoring system wherein interactive application data (col. 6, lines 33-54) is downloaded to a user's terminal (col. 7 line 36 – col. 8 line 38) that is selectively initiated by a remote source (col. 9 line 66 – col. 10 line 35), which provides the benefit of selective control over the reporting of user interactions with interactive objects (col. 3 line 49 – col. 4 line 16 and col. 12 line 52 – col. 13 line 12).

It would have been obvious at the time to a person of ordinary skill in the art to modify the system of Rosser, Kitsukawa, O'Toole, and Kurtzman to include a virtual object applet that provides software capable of initiation by a source external to the terminal, as taught by Del Sesto, for the benefit of selective

control over the reporting of user interactions with interactive objects, as broadcasters rely on statistical samples as opposed to a fully comprehensive report on viewership data (Del Sesto, col. 3, lines 49-67 and Rosser, col. 12, lines 55-63).

8. Claim 55 and 58 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rosser, Kitsukawa, O'Toole, and Kurtzman as applied to claims 43 and 54 above, and further in view of Zigmond.

Regarding claim 55, Rosser, Kitsukawa, O'Toole, and Kurtzman disclose the system of claim 54, but fail to disclose a storage management processor coupled to the extractor, wherein the management processor uses an interactive virtual object retrieval plan to determine which received interactive virtual objects are to be stored at the terminal.

In an analogous art, Zigmond discloses and advertisement insertion system wherein advertisements are pre-screened and only those advertisements which are targeted to the terminal are stored, more efficiently utilizing the limited amount of storage space available in the terminal (col. 15, lines 17-34).

It would have been obvious at the time to a person of ordinary skill in the art to modify the terminal disclosed by Rosser, Kitsukawa, O'Toole, and Kurtzman to include a storage management processor coupled to the extractor, wherein the management processor uses an interactive virtual object retrieval plan to determine which received interactive virtual objects are to be stored at the

terminal, as taught by Zigmond, for the benefit of more efficiently utilizing the limited amount of storage available in the terminal.

Regarding claim 58, Rosser, Kitsukawa, O'Toole, and Kurtzman disclose the system of claim 43, but fail to disclose the terminal further comprises a virtual object placement log, wherein when a virtual object is placed in a virtual object location, the selector processor records the event in the virtual object placement log.

In an analogous art, Zigmond teaches an advertisement insertion system wherein the system tracks the placement and viewing of advertisements by a viewer (fig. 4, statistics aggregation 61, col. 9, lines 21-55), for the benefit of collecting viewership statistics relating to the advertisement (col. 9, lines 33-38).

It would have been obvious at the time to a person of ordinary skill in the art to modify the system disclosed by Rosser, Kitsukawa, O'Toole, and Kurtzman to include a virtual object placement log, wherein when a virtual object is placed in a virtual object location, the selector processor records the event in the virtual object placement log, as taught by Zigmond, for the benefit of collecting viewership statistics relating to the advertisement. Such statistics, in addition to assisting advertisers in determining the effectiveness of their ads, are also more generally used to determine how much a broadcaster can charge an advertiser for ad exposure.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DOMINIC D. SALTARELLI whose telephone number is (571)272-7302. The examiner can normally be reached on Monday - Friday 9:00am - 6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on (571) 272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dominic D Saltarelli/
Examiner, Art Unit 2623